

APPROPRIATION FOR THE ARMORY BUILDING.

LETTER

FROM

THE ACTING SECRETARY OF THE TREASURY,

TRANSMITTING

An estimate of appropriation required for placing in a safe condition the Armory building, occupied by the U. S. Fish Commission.

SEPTEMBER 12, 1893.—Referred to Committee on Appropriations and ordered to be printed.

TREASURY DEPARTMENT,
September 11, 1893.

SIR: I have the honor to transmit herewith, for the consideration of Congress and for such action as it may deem proper, an estimate of appropriation required for placing in a safe condition the so-called Armory building, in the city of Washington, occupied for offices of the U. S. Fish Commission and for workshops of the National Museum, \$12,000; also, an item for the rent of quarters pending repairs to said building, \$3,000, as submitted by the Commissioner of Fish and Fisheries on the 25th ultimo.

Respectfully, yours,

C. S. HAMLIN,
Acting Secretary.

The SPEAKER OF THE HOUSE OF REPRESENTATIVES.

U. S. COMMISSION OF FISH AND FISHERIES,
Washington, D. C., August 25, 1893.

SIR: I have the honor to submit herewith, with the request that in view of its nature the same be forwarded to Congress during its present session, an estimate of appropriation required for placing in a safe condition the so-called Armory building in the city of Washington, occupied for offices of the U. S. Fish Commission and for workshops of the U. S. National Museum; also an item for the rent of quarters pending repairs to said building.

I also enclose, with the request that the same be forwarded to Congress with the estimates in question, the report of the architect and engineer of the Commission on the condition of the building, together with other papers on the same subject.

Very respectfully,

MARSHALL McDONALD,
Commissioner.

Hon. J. G. CARLISLE,
Secretary of the Treasury.

UNITED STATES COMMISSION OF FISH AND FISHERIES.

Repairs of office building.—For a new roof, strengthening of floors, and general repairs, including new elevator, standpipes, and fire-escapes, to the so-called Armory building, now occupied jointly by the U. S. Commission of Fish and Fisheries and the U. S. National Museum, and the building of an annex for a machine shop and boiler house, \$12,000, to be immediately available.

Rent of offices.—For rent of offices in the city of Washington pending the repair of the so-called Armory building, and for the transfer of the office records and equipment, \$3,000, to be immediately available.

DATA RELATIVE TO THE ARMORY BUILDING, WASHINGTON, D. C.,
NOW USED BY U. S. FISH COMMISSION FOR OFFICES, ETC.

And the Secretary of War be, and he hereby is, directed to cause to be constructed on such site, in a central position on the public grounds, in the city of Washington, as may be selected by the President of the United States, a suitable building for the care and preservation of the ordnance, and arms, and accouterments of the United States, required for the use of the volunteers and militia of the District of Columbia, and for the care and preservation of the military trophies of the Revolutionary and other wars, and for the deposit of newly-invented and model arms, for the military service, the said ordnance and arms, and the building to be used by the volunteers and militia of the District of Columbia, under such regulations as may be prescribed by the President, and for the purpose of carrying this act into effect, the sum of thirty thousand dollars be, and the same hereby is, appropriated out of any money in the Treasury not otherwise appropriated.

Approved March 4, 1855.

(Statutes at Large, Vol. 10, p. 665.)

[AN ACT making appropriation for supplying Army for 1857-'58.]

For finishing and furnishing the armory for the militia of the District of Columbia, seven thousand eight hundred and twenty-seven dollars.

Approved March 3, 1857.

(Statutes at Large, Vol. 11, p. 203.)

[Report of Col. O. E. Babcock, in charge of public buildings and grounds, in report for Engineers for 1874, Part II, p. 386.]

As the brick building in this square, known as the "Armory building," is old, unsightly, and contracts the appearance of these grounds, I recommend that authority be given to sell the same at public auction, the proceeds to be used in ornamenting the grounds. For this reason I have not included any sum for their improvement in my estimates for the next fiscal year.

[Extract from report of Secretary of Smithsonian Institution for 1876, p. 46.]

Anticipating the necessity of increased accommodations for the Centennial collections and accessions, the Smithsonian Institution, in 1875, made application to Congress for the use of the Armory building in the square between Sixth and Seventh streets, an edifice 100 feet by 50, having four floors. This it was supposed would be

adequate, at the close of the Centennial, for the reception and exhibition of at least the fishery exhibit and that of economical mineralogy. So great, however, was the surplus of the Centennial material to be provided for that the building is now filled with boxed specimens, occupying for the most part the entire space from floor to ceiling of each room. The building is not fireproof, and although the specimens in it represent some of the most valuable and important of the series, there is nothing to prevent their destruction by fire, or injury from damp, vermin, or other causes, a result which would constitute an irreparable loss.

[Sundry civil bill for 1876-'77. War Department.]

For repairing and fitting up the so-called Armory building on the mall, between Sixth and Seventh streets, and to enable the Smithsonian Institution to store therein and to take care of specimens of the extensive series of the ores of the precious metals, marbles, building stones, coals, and numerous objects of natural history now on exhibition at Philadelphia, including other objects of practical and economical value presented by various foreign governments to the National Museum, four thousand five hundred dollars: *Provided*, That the said sum shall be expended under the direction of the Secretary of the Smithsonian Institution.

Approved July 31, 1876.

(Statutes at Large, Vol. 19, p. 120.)

[Sundry civil bill, 1877-'78. Interior Department.]

For fitting up the Armory building for storage of articles belonging to the United States, including those transferred from the International Exhibition and expense of watching the same, two thousand five hundred dollars.

Approved March 3, 1877.

(Statutes at Large, Vol. 19, p. 350.)

[Extract from report of Secretary of Smithsonian Institution for 1878, p. 41.]

In anticipation of these donations Congress had previously authorized the transfer to the Smithsonian Institution, for the purpose of storage, of the Armory building, on the square between Sixth and Seventh streets, and made an appropriation to fit it up for the reception of the collections. To this building a portion of these collections was transferred, where they now fill four floors of about 5,000 square feet each from top to bottom, the remainder being stored in the basement of the Smithsonian Institution.

[Sundry civil bill for 1878-'79. Smithsonian Institution.]

Preservation of collections, Smithsonian Institution, Armory building: For expense of watching and storage of articles belonging to the United States, including those transferred from the International Exhibition, of eighteen hundred and seventy-six, two thousand five hundred dollars.

Approved June 20, 1878.

(Statutes at Large, Vol. 20, p. 233.)

[Sundry civil bill for 1879-'80. Smithsonian Institution.]

Perservation of collections, Smithsonian Institution, Armory building: For expense of watching and storage of articles belonging to the United States, including those transferred from the International Exhibition of eighteen hundred and seventy-six, two thousand five hundred dollars.

Approved March 3, 1879.

(Statutes at Large, Vol. 20, p. 397.)

[Sundry civil bill for 1882-'83. National Museum.]

For the preservation of collections of the National Museum in the Armory building: For care of the Armory building and expense of watching, preservation, and storage of the duplicate collections of the Government and of property of the United States Fish Commission contained therein, including salaries or compensation of all necessary employes, two thousand five hundred dollars. And the distribution of duplicate specimens of the National Museum and Fish Commission may be made to colleges, academies, and other institutions of learning upon the payment by the recipients of the cost of preparation for transportation and the transporation thereof.

Approved August 7, 1882.

(Statutes at Large, Vol. 22, p. 332.)

APPROPRIATION FOR THE ARMORY BUILDING.

[Sundry civil bill for 1883-'84. National Museum.]

For the preservation of collections of the National Museum in the Armory building: For care of the Armory building and grounds, and expense of watching, preservation and storage of the duplicate collections of the Government, and of property of the United States Fish Commission contained therein, including salaries or compensation of all necessary employes, two thousand five hundred dollars. And the distribution of duplicate specimens of the National Museum and Fish Commission may be made to colleges, academies, and other institutions of learning upon the payment by the recipients of the cost of preparation for transportation and the transportation thereof.

Approved March 3, 1883.

(Statutes at Large, Vol. 22, p. 629.)

[Sundry civil bill for 1884-'85. National Museum.]

For the preservation of collections of the National Museum in the Armory building: For care of the Armory building and grounds and expense of watching, preservation, and storage of the duplicate collections of the Government and of the property of the United States Fish Commission contained therein, including salaries or compensation of all necessary employes, two thousand five hundred dollars.

Approved July 7, 1884.

(Statutes at Large, Vol. 23, p. 214.)

[Sundry civil bill for 1885-'86. National Museum.]

For the preservation of collections of the National Museum in the Armory building: For care of the Armory building and grounds, and expense of watching, preservation, and storage of the property of the National Museum, and of the United States Fish Commission contained therein, including salaries or compensation of all necessary employes, two thousand five hundred dollars.

Approved March 3, 1885.

(Statutes at Large, Vol. 23, p. 501.)

[Sundry civil bill for 1888-'89. U. S. Fish Commission.]

Provided, That the building known as the Armory building, Washington, District of Columbia, shall be occupied, as at present, jointly by the United States Commission of Fish and Fisheries and the National Museum.

Approved October 8, 1888.

(Statutes at Large, Vol. 25, p. 521.)

[Sundry civil bill for 1889-'90. Fish Commission.]

For altering and fitting up the interior of the Armory building, on the Mall, city of Washington, now occupied as a hatching station, for the accommodation of the offices of the United States Fish Commission, and for general repairs to said building, including the heating apparatus, and for repairing and extending the outbuildings, seven thousand dollars, or so much thereof as may be necessary, the same to be immediately available and to be expended under the direction of the Architect of the Capitol; and for the purposes above named the Secretary of the Smithsonian Institution is hereby required to move from the second and third stories of this building all properties except such as are connected with the workshops hereinafter named, under his control; and the workshops now in the second story of said building shall be transferred to and provided for in the third story thereof.

Approved March 2, 1889.

(Statutes at Large, Vol. 25, p. 953.)

ARCHITECT'S OFFICE, U. S. CAPITOL,
Washington, D. C., April 1, 1889.

SIR: I regret to have to say that I consider the loft of the Columbia Armory building, now used by you as a hatching station, to be dangerously loaded. Heavy plaster models are placed right between the bearings of the joists, which have deflected considerably since this load has been put upon them.

In my opinion, the safety of the building requires that this weight should be removed at once. If you can furnish temporary shelter for these casts, and other heavy

material stored in the loft of the building referred to, I will give directions to have erected a storehouse, about 18 by 50 feet in size, at the west of your present storehouse, for the reception of the material in this loft.

Very respectfully,

MARSHALL McDONALD, Esq.,
Commissioner of Fisheries, etc.

EDWARD CLARK,
Architect U. S. Capitol.

U. S. COMMISSION OF FISH AND FISHERIES,
Washington, D. C., July 1, 1889.

DEAR MR. CLARK: You have been so considerate already in arranging for our convenience in fitting up our quarters here, that I dislike to trouble you further in regard to the matter. I must, however, call your attention to the fact that the roof is in very bad condition, the recent rains having developed a number of leaks which endanger our records and other like property stored in the attic.

As long as they continue the building will be subject to constant deterioration. I am certain that nothing but a radical reconstruction of the roof, or indeed a new roof entire, will prove an adequate remedy for the present condition of things, and I hope you will keep the matter under advisement with a view of submitting a deficiency estimate for the completion of the alterations and repairs of the building.

Meanwhile, if you are not able to do anything with the present roof, we will patch it up as best we can. Would it not be well to have an examination made now with a view to the submission of your estimates when Congress assembles?

Very truly yours,

Hon. EDWARD CLARK,
Architect of the Capitol.

M. McDONALD,
Commissioner.

U. S. COMMISSION OF FISH AND FISHERIES,
Washington, D. C., December 8, 1890.

DEAR SIR: I have the honor to submit the following provisional estimates of the cost of adding a 12-foot story to the office building occupied by the Commission, corner Sixth and B streets SW.

You will notice that I provide in my estimate for replacing the present attic floor and for certain repairs to the floor timbers which are necessary. This floor is in very bad repair, the timbers drawn out of place, and it is possible that it will require a larger expenditure than that estimated to make it safe. I have added 15 per cent to cover any such contingencies.

A new boiler will be needed, and this together with the necessary steam fittings, radiators, etc., would cost about \$1,200. I have included an item of \$350 for a new boiler house.

It would not be safe to begin such alterations as those proposed without an appropriation of at least \$10,000. I should say that including furniture and all fittings, \$12,000 would be needed.

Yours respectfully,

Hon. MARSHALL McDONALD,
U. S. Commissioner of Fish and Fisheries.

C. E. GORHAM,
Architect and Civil Engineer.

U. S. COMMISSION OF FISH AND FISHERIES,
Washington, D. C., February 16, 1891.

DEAR SIR: I beg to report that the tendency of the floors of this building to settle seems to have recently strengthened to a remarkable degree. Between the rooms occupied by Dr. Gorham and Mr. Bayley the floor has dropped a full inch in the last few days. I think there can be no doubt that the matter is sufficiently serious to warrant removing at once all heavy material stored in the third and fourth stories of the building and taking up without delay the flooring and making a close inspection of the condition of the joists and other timber.

Very respectfully,

Hon. MARSHALL McDONALD,
U. S. Fish Commissioner, Washington, D. C.

J. PAUL WILSON.

APPROPRIATION FOR THE ARMORY BUILDING.

U. S. COMMISSION OF FISH AND FISHERIES,
Washington, D. C., February 28, 1891.

SIR: I respectfully call the attention of your committee to the estimates of appropriations for the U. S. Fish Commission, required for the fiscal year ending June 30, 1891, and prior years, as forwarded through the honorable Secretary of the Treasury (House Ex. Doc. No. 167, Fifty-first Congress, second session), and to the deficiency bill (H. R. 13658, page 9), wherein provision is made for the first item only, of those submitted.

In regard to the item for office building, Fish Commission, I would state that when the Armory building was adapted for the offices of the U. S. Fish Commission the amount appropriated for the purpose was such as to admit of but the simplest alterations; whereas if proper renovation had been made, the old floors, beams, etc., which had been subjected for many years to heavy strains through overloading, etc., would have been removed. The offices now provided for are not sufficient for the current needs of the Commission, and it is desired that the balance of the third floor of the building, now occupied as workshops for the taxidermists, modelers, etc., of the U. S. National Museum and U. S. Geological Survey, be fitted up for the Commission; and that the attic be arranged for the storage of files, publications, etc., and provision made for the necessary extension of the heating and water apparatus and the proper lighting of the building.

By reason of quite serious settling recently of a portion of the third floor of the building repairs should be made at once, and the opportunity would seem to be favorable for the complete adaptation of the building to the needs of the Commission. I would also call attention to the divided responsibility now attached to the custody of the building, as well as to the character of the work carried on in it by the Smithsonian Institution, which work is at variance with office routine.

The committee will readily appreciate the fact that taxidermical work is, from its nature, productive of considerable odor, dirt, and noise, and should be remote from a building used for office purposes.

Requesting favorable consideration by the committee of the items as submitted, I have the honor to be,

Very respectfully,

M. McDONALD,
Commissioner.

Hon. W. B. ALLISON,
Chairman Committee on Appropriations, United States Senate.

The following extract was included in the estimates for deficiencies in appropriations for 1891, forwarded to the Secretary of the Treasury on December 10, 1890:

"Office building, Fish Commission.—For raising the walls, providing a new roof, and fitting up the interior of the third and attic stories of the Armory building on the Mall, city of Washington, for offices, files, and storage rooms, and their equipment, and for the enlargement and extension of the heating and water apparatus, and the purchase of all necessary gas fixtures, \$12,000. And the Secretary of the Smithsonian Institution is hereby required to remove the workshops under his direction, now in the third story of said Armory building, to other buildings under his control, and the whole of said Armory building shall hereafter be under the care and custody of the U. S. Commissioner of Fish and Fisheries. \$12,000." (Estimates of appropriations for 1891-1892, sup., p. 7.)

The following extract was included in the estimates for deficiencies in appropriations for 1893 forwarded to Secretary of Treasury, December 19, 1892:

Office building, U. S. Fish Commission.—For new roof, construction of annex for boiler room, coal vault, and fireproof storage room, the purchase and introduction of new boilers for heating and the necessary connections, and for miscellaneous repairs and equipment, \$2,500; and the Secretary of the Smithsonian Institution is hereby directed to vacate the rooms under his charge in said building. For fitting up said rooms as offices for the U. S. Fish Commission, \$1,400; in all, \$3,900.

U. S. COMMISSION OF FISH AND FISHERIES,
Washington, D. C., April 25, 1893.

DEAR SIR: The safety of the building at the northwest corner of Sixth and B streets SW., this city, occupied as offices, etc., by this Commission, having been questioned, and the case apparently demanding immediate action, I have respectfully to

request that you detail one of the engineers of your office to make an inspection of the building and report thereon. The absence of the engineer of the Commission on field duty is the reason of my trespassing upon your courtesy in the matter.

Very respectfully,

RICHARD RATHBUN,
Acting Commissioner.

The SUPERVISING ARCHITECT,
Treasury Department, Washington, D. C.

U. S. COMMISSION OF FISH AND FISHERIES,
Washington, D. C., June 3, 1893.

SIR: I am to-day advised that the report of your engineer upon the safety of the building corner of Sixth and B streets SW., occupied as offices by the U. S. Fish Commission, is completed but has not yet been transmitted to this office pending an official request for the examination of the building. In this connection I beg to refer you to the letter addressed you under date of April 25, 1893, by Mr. Richard Rathbun, Acting Commissioner of Fisheries, as also to his letter sent you under date of April 28, 1893, on the same subject.

Very respectfully,

M. McDONALD,
Commissioner.

The SUPERVISING ARCHITECT,
Treasury Department, Washington, D. C.

TREASURY DEPARTMENT,
OFFICE OF THE SUPERVISING ARCHITECT,
Washington, D. C., June 6, 1893.

SIR: In reply to your letter of the 3d instant, I have to advise you that the Fish Commission building has been examined by a representative of this office, from whose report I make the following extract:

"There is no immediate danger to the building from any cause visible at present. The outside walls are in good condition. The roof trusses show slight decay, and in one case $1\frac{1}{2}$ inches settlement. The loft floor sags about 3 inches in 53 feet. No signs of weakness show in girders of floor below the loft. The girders are wood with straps. Posts in second story are wood. All columns below are cast iron. These supports are in good condition. I recommend that no weight be put in the loft; and that, in a short time, it will be advisable to rebuild the roof trusses, including the loft floor."

Respectfully yours,

C. G. KEMPER,
Acting Supervising Architect.

Hon. MARSHALL McDONALD,
Commissioner U. S. Commission of Fish and Fisheries, Washington, D. C.

U. S. COMMISSION OF FISH AND FISHERIES,
Washington, D. C., August 9, 1893.

DEAR SIR: In compliance with your request of June 9, relative to an examination as to the safe or unsafe condition of the building now occupied by the U. S. Fish Commission and other branches of the Government, I would respectfully make the following report, in which reference is made to the accompanying blue print:

1. *Foundation.*—The foundation of all walls as well as that of all iron columns supporting the floors does not show the slightest settlement nor any signs of weakness.

2. *Walls.*—The main walls, from foundation up to near attic floor, are straight and plumb, inside and outside, without cracks or other defects. From near attic floor to top of parapet wall there are a number of places where the walls are slightly bulging out. From the investigations made, the primary cause of this is assigned to leakage of the roof and gutter in the rear of the parapet wall; the rain water or melting snow getting into the walls and freezing there in very cold weather, gradually split a shell off the wall wherever the brickwork was not well bonded. Wherever the rafters and tiebeams of roof truss were exposed to this leakage in the roof the timbers are badly rotten and very weak.

The parapet wall, being built over an overhanging cornice, has been exposed on

both sides to the direct influence of the weather for about forty years past, the age of the building, and varies at places 3 inches from a straight line latterly.

3. *Floors.*—(A) The first or ground floor is made of stone flagging laid in cement mortar; it is well constructed and in good condition.

(B) The second floor rests on 3 by 12 inch joists, which are framed into 12 by 12 inch yellow pine girders, the latter being supported by cast iron columns $7\frac{1}{2}$ inches in diameter, as shown. The workmanship in the framing of the floors is fair, the material sound, and the floor may be loaded safely with 80 pounds per square foot, which is equal to the weight of a crowd of people. To place more weight upon this floor, as per example in storing heavy goods, would endanger the safety of the building.

(C) The construction of the third floor was originally intended to be similar to that of the second. By some gross carelessness the so-called joist-carrier strips were left off in the construction of the building and most of the joists have their only support in the notches, which are cut in the girder, of barely three-eighths of an inch, in some places not even one-eighth of an inch, and at one place, viz, the "model room of the Geological Survey," no support whatever. (See detail.) At the latter place the floor joists are actually carried for a short distance by the floor which is nailed into them. The notches in the original 12 by 12 inch girder were three-fourths of an inch deep; by the shrinkage though, of the girder, amounting to nearly three-fourths of an inch, the joists lost all or nearly all their bearing upon the same.

The third floor shows unmistakable signs of having at one time been heavily overloaded, many depressions of over 2 inches existing between the girders. The existing unsafe condition of this floor has been recognized and partly removed some time ago, as a number of heavy iron clamps were secured in the middle floor joists to prevent their leaving the support on the girders entirely. The load which this floor can carry safely is a very variable quantity, ranging from almost nothing to, say, 40 pounds per square foot, depending upon the amount of bearing surface of said joists on said girders. Any storage of heavy goods upon this floor is extremely dangerous, and all jarring upon the floor must be avoided. The material in the girders and joists appear still good.

(D) The attic floor as such did not exist in the original construction of the building. There was simply a ceiling suspended from the roof trusses. The present floor rests upon the original 2 by 10 inch ceiling joists with a span of $9\frac{1}{2}$ feet between the tie-beams of the roof trusses and a span of 16 feet each between the two end trusses and walls of the building. The joists are notched into the beams of roof trusses five-eighths of an inch, and have an additional support on a 1 by 4 inch joist-carrier strip nailed to the tie beam. The shrinkage in the tie beams resulted in reducing the bearing of the joists in said notches at a great many places to almost nothing, so that their support is furnished by the carrier strips only. The attic floor while, as before stated, not a part of the original plan of the building, was in 1877, or soon thereafter, more than overloaded, so that it sagged to such an extent that the load upon it had to be removed again and a number of wooden posts erected to secure it in its place. The floor even now, with said posts under the tie beams, is not strong enough to carry a load of, say, 40 pounds per square foot with safety, which precludes all usage of the attic for storage purposes of heavy material. Near the west end of the building the attic floor is at present $6\frac{1}{2}$ inches lower in the middle than at the walls, and is more or less out of level all along.

(E) The roof of the building is carried upon a number of wooden trusses, strongly framed, iron strapped, well bolted together and here and there anchored in the wall. In the graphical representation of the stresses in said trusses a total weight of roof of 50 pounds per square foot was assumed. The truss was found theoretically to be amply strong in all its parts for the purpose intended, but too weak to carry in addition to the roof a heavily loaded floor. In places it is even unsafe, as there is plain evidence of well advanced decay in a number of the tie-beams and rafters, where the ends are resting on the walls. I would mention four places especially where the said decay has gone sufficiently far to make the roof truss, and with it the attic floor, unsafe. These are at A, B, C, and D of appended plans. There the tie beams not only slid bodily over $1\frac{1}{2}$ inches away from their original bed on the wall on account of their sagging in the center, but also settled $1\frac{1}{2}$ inches by reason of the decay in their end-bearing surface.

A number of the horizontal braces between the roof trusses, which are an essential part of the roof construction, have been removed or dropped out on account of the shrinkage of the truss members, thus reducing the calculated strength of the truss over 75 per centum. The wooden posts under the tie-beams of the roof truss, while they greatly strengthen the attic floor, are not sufficient to render the attic floor strong enough for storing goods, especially so as the ends of some of said tie-beams are partly decayed and unsafe. The rafters of the roof construction are in fair condition, except at those places enumerated above where the roof is leaking and the woodwork became rotten.

Elevator.—The construction of the elevator is obsolete, and only serviceable in a strongly built warehouse. It is subjected to such vibrations in its manipulation that it endangers the safety of the building. Any heavy material hoisted by it brings such concentrated loads upon the roof construction, and causes such jarring of the upper floors, that the already weak condition under their own quiescent load may at any time result in a collapse of a part of the building.

RECOMMENDATIONS.

1. The first defect in the construction of the building above mentioned is the bulging of the upper part of the main walls caused by the leakage of the roof and gutter. The broken slates of the roof should be replaced by new ones, the present gutters and flashing removed and put in anew; estimated cost, \$300.

2. The next item of defect is the bad workmanship in the construction of the third floor. This needs the taking up of a large part of the floor and the employment of wrought iron stirrups to support all the floor joists, or the removal of the second story ceiling under all cross girders and the substitution for said stirrups of joist-carrier strips strongly spiked to said girders. All ends of the cross girders should be carefully examined whether or not they show decay in the walls, and if decay is found they should be strengthened by new timbers bolted on underneath and properly bedded in the walls. All heavy material stored at present on said floor should be removed, and I would especially mention the early removal of the large cans of specimens kept in alcohol, the alcohol in store, the large plaster models, and the reduction of the depth of water, which is kept in the cistern at the west end of the hall, to not over 9 inches. The cost of the proposed repairs of the third floor I estimate at \$750.

3. The third item of defect above enumerated is the weak condition of the attic floor. This can not well be remedied without reconstruction of the same, together with the reconstruction of the roof trusses which support the attic floor. To render the attic floor safe for the present all heavy material should be removed therefrom, especially at those places above mentioned, where the tie beams are decayed. The height of the water level of the salt-water cistern in the attic should be reduced to not over 9 inches. The cost of a new attic floor would not be less than \$1,000.

4. The fourth item of construction in an unsafe condition is that of the roof trusses on account of the shrinkage and decay, as well as that of the posts supporting the trusses and a number of the rafters.

The roof trusses should be renewed entirely and the new ones should be so situated that every second one should be directly over the columns instead of as at present. (See plans.) The columns and girders under the trusses should be 12 by 12-inch timbers instead of 7½ by 7½ inches as at present; the rafters showing decay should be renewed. Should the Commission conclude to rebuild the roof, I would advise that the walls be taken down to the attic floor in order to remedy the above-mentioned bulging of the wall and obtain a solid and secure bearing for the new roof construction.

The cost of the new construction of the roof, including said new part of the wall, will not be less than \$3,000.

5. The last item considered herein as faulty in construction is the elevator. I would recommend the erection of a new hydraulic elevator of modern construction in place of the present hoisting platform, which would cost in the vicinity of \$1,500, and the discontinuance of the use of the present elevator except for very light weights, and then only under careful manipulation.

6. In addition to the above recommendations, I would mention the suggestion made to me by the chief clerk of the U. S. Fish Commission, Mr. Herbert A. Gill, that the building should be properly protected from danger of fire by the erection of a suitable number of standpipes provided with hose, cocks, etc., on every floor and the roof; and, furthermore, by two iron fire-escapes, with landings on every floor. These last two items would cost about \$800.

Recapitulation of estimates of costs for items of repair and construction as recommended.

1. Slates, gutters, flashings.....	\$300
2. Third floor, supports of joists and girders.....	750
3. Attic floor, new.....	1,000
4. Roof and part of wall, new.....	3,000
5. New elevator.....	1,500
6. Standpipes and fire escapes.....	800
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	7,350
Supervision, contingencies and profit, 20 per cent.....	1,470
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Total.....	8,820
Estimated cost of present building without repair, etc.....	45,000

Before concluding this report I would say that even after the recommended repairs and additions are made and the building pronounced safe I consider it unsuitable for the purposes of the U. S. Fish Commission. There should be ample strength on all floors to allow the storage of the large collections of specimens, of the material and apparatus for fish culture, of the numerous cases, books, and publications, and of the tanks needed for the supply of the aquaria. This would require new floors throughout able to withstand a maximum safe load of from 200 to 250 pounds to the square foot, instead of from only 40 to 80 pounds per square foot, as it will when repaired.

Very respectfully,

H. VON BAYER,
Architect and Engineer.

HERBERT A. GILL, Esq.,
Acting Commissioner, U. S. Commission of Fish and Fisheries.

U. S. COMMISSION OF FISH AND FISHERIES,
Washington, D. C., August 21, 1893.

DEAR SIR: Serious fears existing as to the safety of the building occupied as offices by the U. S. Fish Commission, I would respectfully request that you cause an early examination of the same to be made, and ask that I be advised of the result, together with your recommendations.

This request is made of you as the altering and fitting up of the interior of the building, provided for by the act of March 2, 1889, was done under your direction. An early response as to your ability to meet the same will be greatly appreciated.

Very respectfully,

HERBERT A. GILL,
Acting Commissioner.

Hon. EDWARD CLARK,
Architect U. S. Capitol, Washington, D. C.

ARCHITECT'S OFFICE, U. S. CAPITOL,
Washington, D. C., August 24, 1893.

SIR: In compliance with your request of the 21st instant, I have examined the building now occupied by the U. S. Fish Commission as offices, and by the U. S. National Museum as workshops, and have examined the report made upon the condition of this building by Mr. H. von Bayer, architect and engineer, and certain recommendations made by him as to rendering this building more secure for the purposes for which it is now used.

I agree with the statement of the architect relative to the present condition of the building, and approve his recommendations for its repairing and strengthening. I consider the following improvements should be made at once in order to provide for its greater safety:

First. That all articles stored in the loft be taken out.

Second. That measures be taken to insure bearings for the ends of the joists on the girders, and that no additional weight should be imposed upon the other floors of this building which are supported by wooden joists and girders.

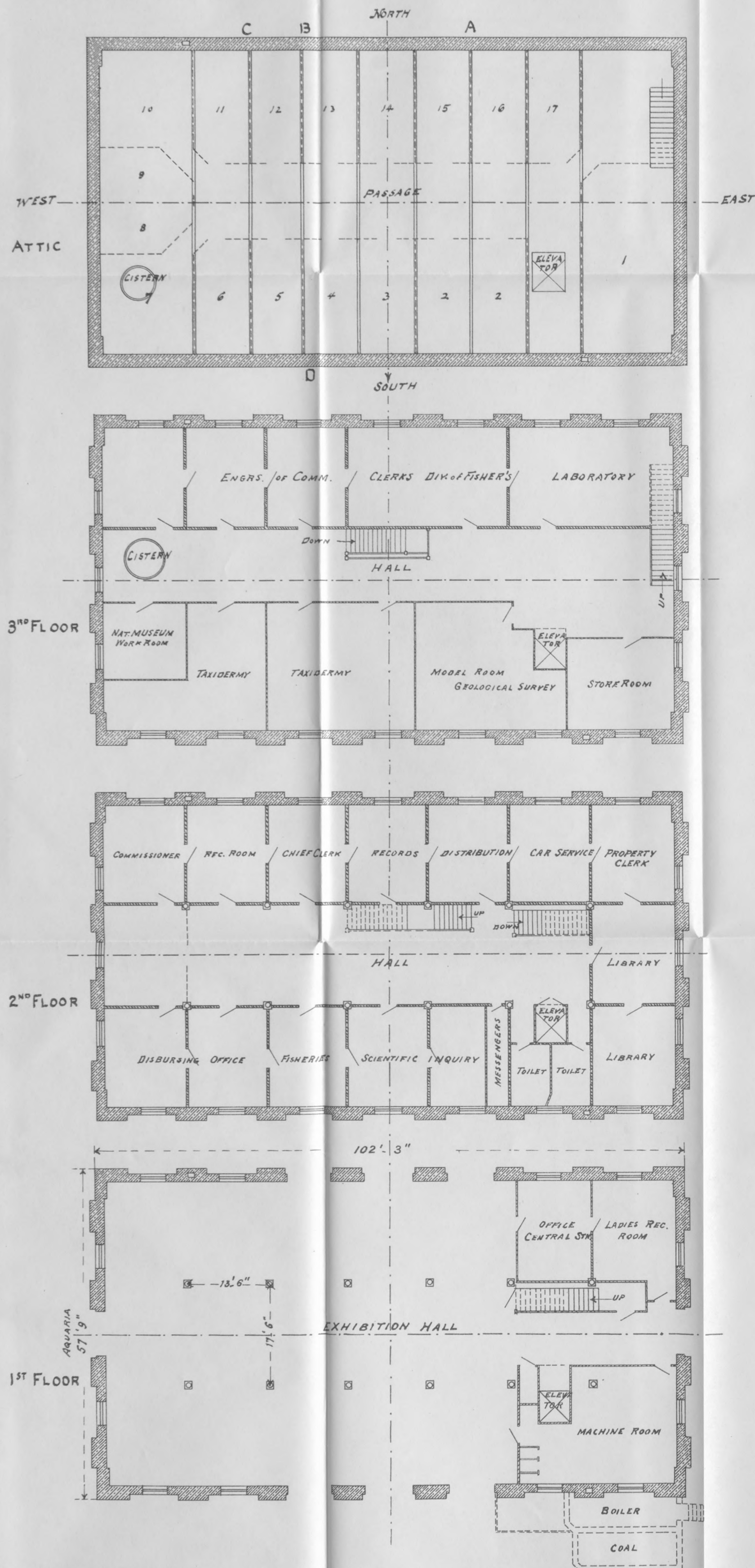
Very respectfully yours,

EDWARD CLARK,
Architect, U. S. Capitol.

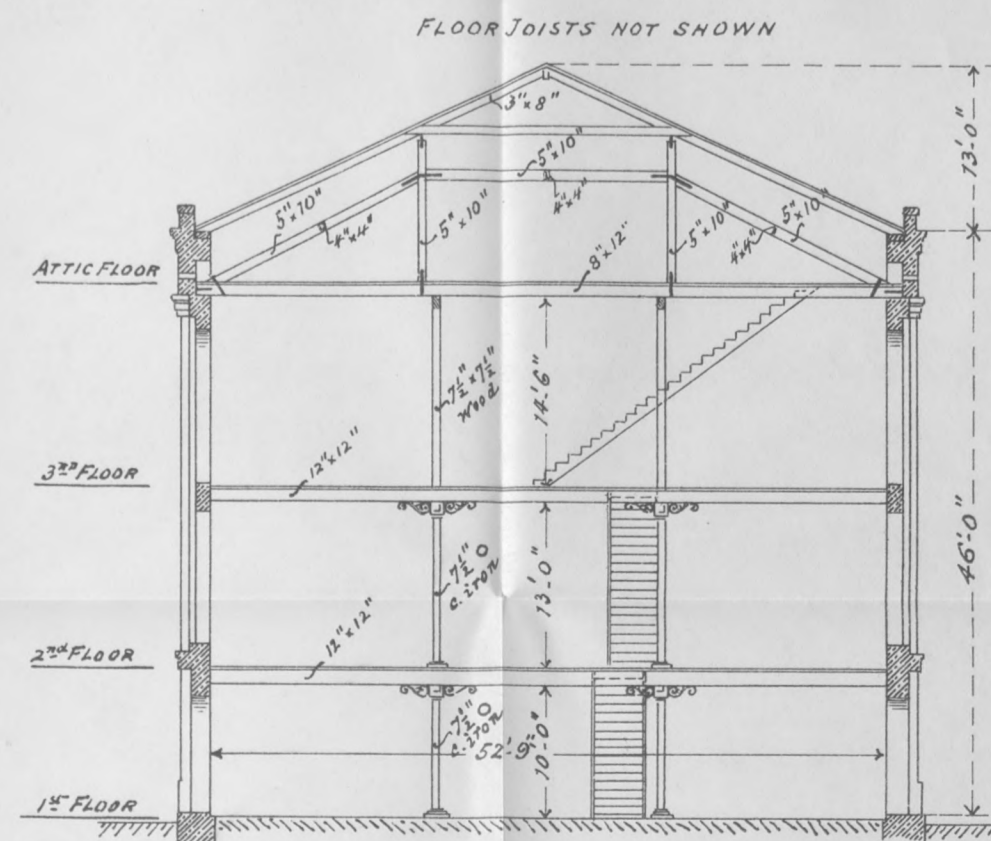
Mr. HERBERT A. GILL,
Acting Commissioner Fish and Fisheries, Washington, D. C.

PLANS OF BUILDING OCCUPIED BY THE U.S. FISH COMMISSION. WASHINGTON, D.C. 1893.

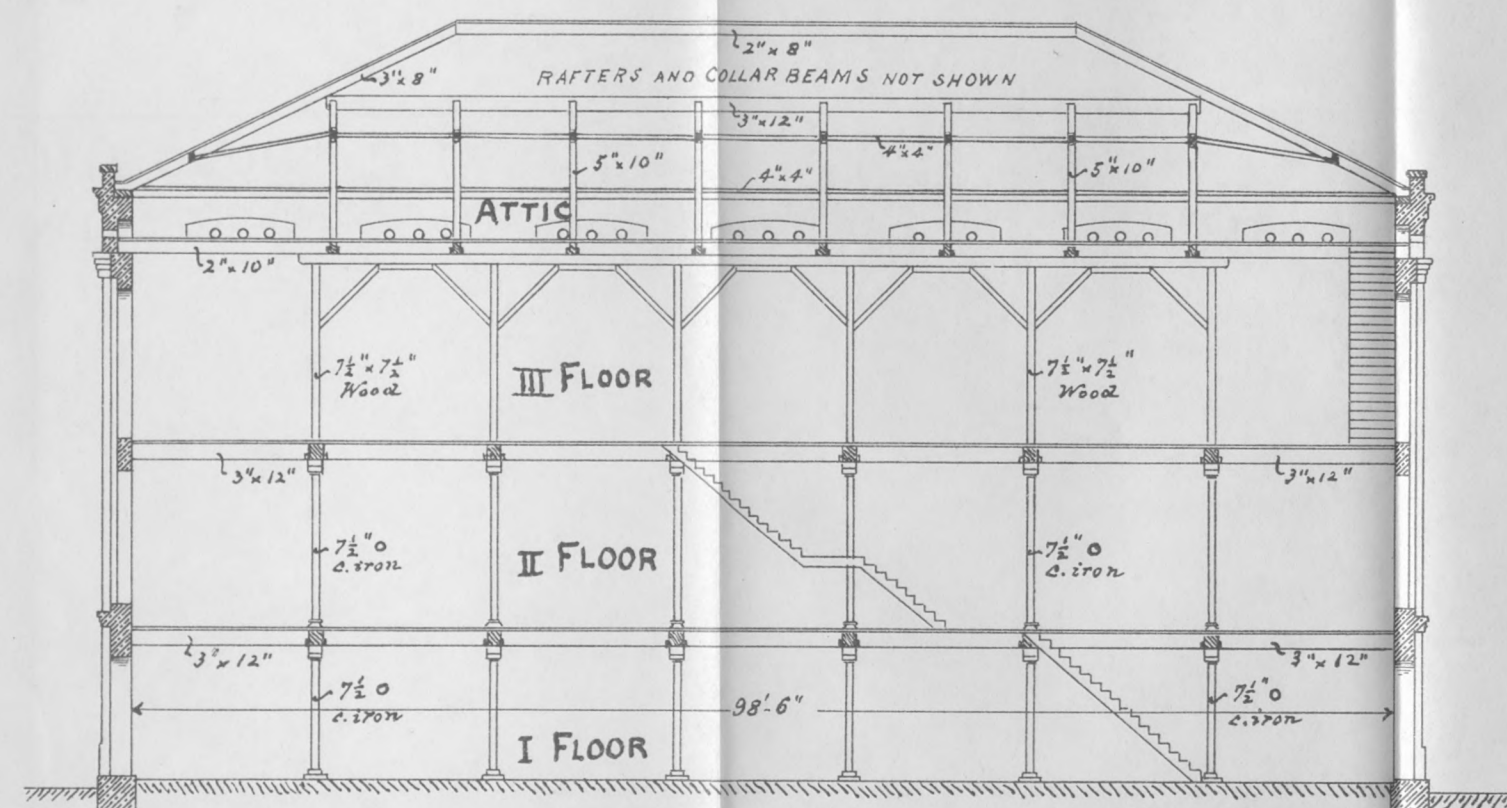
GROUND PLANS.



TRANSVERSE SECTION



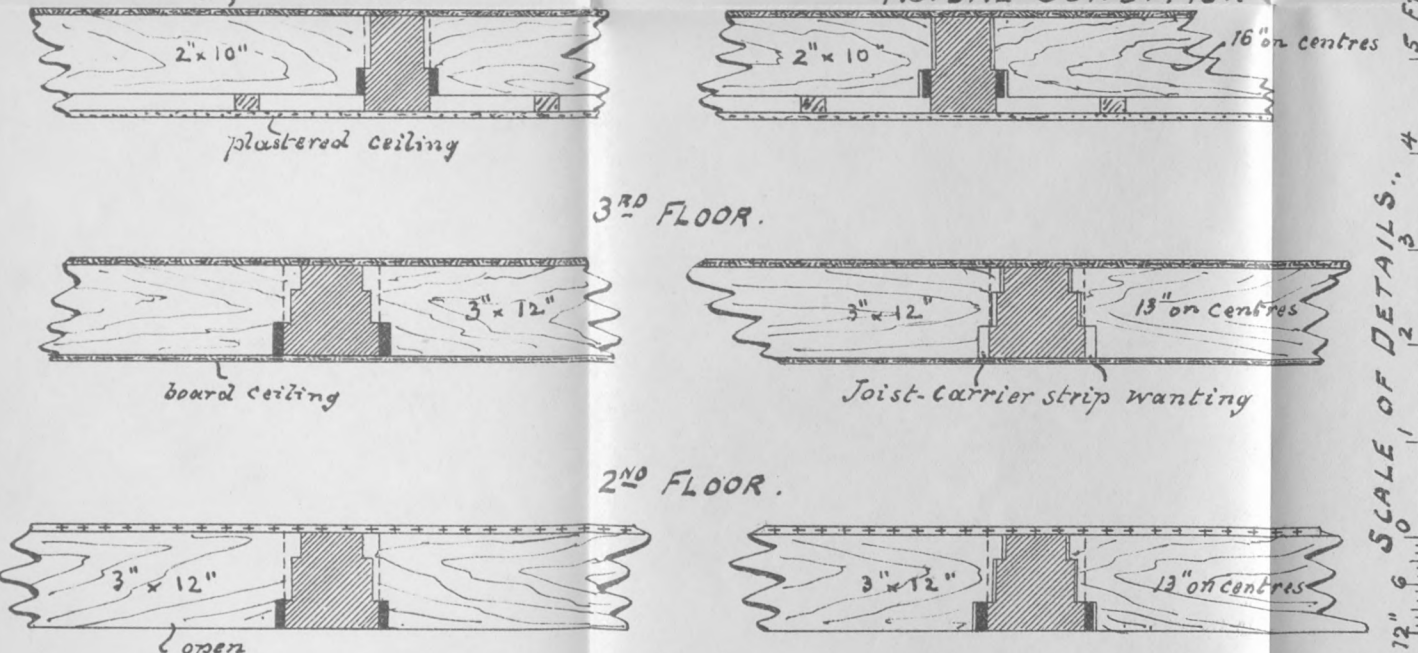
LONGITUDINAL SECTION



FRAMING, PLANNED

ATTIC FLOOR.

ACTUAL CONDITION



STRESS DIAGRAM, ROOF TRUSSES.

